

shaped end **6261** may be formed by a set of teeth imprinted on side edges **6262** of the gear plate **6249**. A first toothed side edge **6262(a)** may be substantially parallel and substantially adjacent to a second toothed side edge **6262(b)**. The teeth on the first toothed side edge **6262(a)** of the gear shaped end **6261**, may be offset by a desired tooth spacing with respect to the teeth on the second toothed side edge **6262(b)** of the gear shaped end **6261**. Such an embodiment may allocate an identical gear plate **6249** to be used as an opposing gear plate in the clamp assembly **6205**. FIG. **32B** depicts a side view of the gear plate **6249**. The offset spacing **9030** between the teeth on the two toothed side edges **6262(a)** and **6262(b)**, can be best seen through FIG. **32B**. Alternatively, a different embodiment of the clamp assembly may provide two differently designed gear plates that oppose each other in a clamp assembly. FIG. **32B** also depicts the connector grooves **6267** on the gear plate **6249**. The connector grooves **6267** are configured to receive the connectors that may engage the gear plates **6249** with the frame **6215**, as shown by FIG. **28F**.

[0909] FIG. **32A** further depicts a room **6276** between the adjacent toothed side edges **6262(a)** and **6262(b)** may include a pocket **6275**. The pocket **6275** may extend from a first toothed side edge **6262(a)** of the gear plate **6249** to a second toothed side edge **6262(b)** of the opposing gear plate. The pocket **6275** may further serve to receive a portion of a stack of bias members **6273**, as depicted in FIG. **29A** and FIG. **29B**. A similar pocket may be provided in an opposing gear plate **6249** of an exemplary clamp assembly. The stack of bias members may be substantially held by the two opposing pockets **6275** of the opposing gear plates **6249**.

[0910] FIG. **32C** depicts a representational, back view of an embodiment of a gear plate **6249** of an exemplary clamp assembly **6205**. The components of FIG. **32C** are hereby discussed in combination with FIG. **28F**, as shown before. A section **6220** is depicted in FIG. **32C**, which may serve to receive a portion of the actuator **6217**. An inserting member **6253** of the actuator **6217** may be disposed in the section **6220** of the gear plate **6249**, as shown in FIG. **28F**. The section **6220** may also provide a set of attaching points **6250**, depicted in FIG. **32C**, which may serve to engage the inserting member **6253** of the actuator **6217**. The inserting member **6253** may be fastened with the gear plate **6249** using screws, bolts, nuts, pins, etc.

[0911] FIG. **33A** and FIG. **33B** respectively depict a front and back, representational view of an exemplary actuator **6217** of an example clamp assembly **6205**. The components of FIG. **33A** and FIG. **33B** are hereby discussed in combination with FIG. **28F**. The actuator **6217** may be divided into an inserting member **6253** and a paddle member **6251**. The inserting member **6253** may serve as a coupling component for joining the actuator **6217** with a gear plate **6249**, as shown in FIG. **28F**. The inserting member **6253** may be received by a section **6220** of the gear plate **6249**, as shown in FIG. **28F**. FIG. **33B** depicts a set of attaching points **6218** may be provided on the inserting member **6253** to engage the actuator **6217** with the gear plate **6249** as shown in FIG. **28F**. These attaching points **6218** may be in conjunction with a set of attach points provided on the gear plate **6249**.

[0912] A paddle member **6251** may be a user operated component and may facilitate the user to operate a clamp assembly. The paddle member **6251** may extend outward from the frame **6215** of a clamp assembly **6205**, as shown in FIG. **28F**. A downward force on the paddle member **6251** of

the actuator **6217**, may cause the clamp assembly **6205** to displace from a closed position (shown in FIG. **29A**) to an open position (shown in FIG. **29C**).

[0913] FIG. **34A** and FIG. **34B**, respectively depict front and back representational views of an embodiment of a latch **6221** in an exemplary clamp assembly. The components of FIG. **34A** and FIG. **34B** may be explained with reference to FIG. **30C**. As shown earlier through FIG. **30C**, the latch **6221** may be configured to be received by a socket **6241** provided on a back surface **6239** of a frame **6215**. The latch **6221** may serve as a locking mechanism for the engagement between the clamp assembly **6205** and a clamping device. The latch **6221** may further comprise a flap portion **6224** and a lever portion **6222**. Continuing reference to FIG. **30C** the latch **6221** may be coupled with the socket **6241** in a way that the flap portion **6224** and the lever portion **6222** may restrictively pivot around a rim of the socket **6241**.

[0914] A lever portion **6222** of the latch **6221** may be a user operated portion. As shown in FIG. **30C**, the lever portion **6222** may rest on a groove **6254** provided on the connecting edge between a top surface **6223** and a back surface **6239** of a frame **6215**. The latch **6221** may be attached with the frame **6215** via a flexible member **6223**, as shown in FIG. **30C**. The flexible member **6223** may be glued to the frame **6215** or mechanically fastened using screws, bolts, nuts, pins, etc.

[0915] FIG. **35A** and FIG. **35B** depict back and front, representational views, respectively, of an embodiment of a holding structure **6203**, in an exemplary clamp assembly **6205**. The components of FIGS. **35A** and **35B** can be better explained in combination with FIG. **21A**. The holding structure may be divided into a top portion **6235**, an intermediate rod shaped portion **6238** and a base portion **6237**. The intermediate rod shaped portion **6238** may serve as a grasping portion that may be received by a jaw shaped end **6219** of the clamp assembly **6205**, as shown in FIG. **21A**. The intermediate rod portion **6238** may further provide a rib portion **6245**. The rib portion **6245** may serve as a slide-able component as the jaw shaped end **6219** of the clamp assembly **6205**, begins to grip the intermediate rod shaped portion **6238**.

[0916] As shown in FIG. **35B** and FIG. **21A**, a base portion **6237** of the holding structure **6203** may provide a passage **6234** for extending a data and power supply circuitry from a backbone **6201** to a clamped device **6207** of an exemplary clamping arrangement **6200(b)**. The base portion **6237** may further comprise an alignment component **6236** configured to receive a complementary alignment component **6263** provided on the clamp assembly **6205**. The engagement between the alignment component **6236** and the complementary alignment component **6263** may provide an additional engagement between the holding structure **6203** and the clamp assembly **6205**, as shown in FIG. **21A**. Furthermore, the base portion **6237** of the holding structure **6203** may be received by a depression or a housing **6233** in a detachable data and power supply pack **6209**. Such an engagement may facilitate an unobstructed electrical communication between the base portion **6237** of the holding structure **6203** and the device **6207**.